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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Eshwar Pittampalli
Subramanian Vasudevan

CASE 14-1

Serial No. 09/726962 Group Art Unit 2685

Filed November 30, 2000

Examiner S. Nguyen

Title System And Method For Preventing Dropped Calls

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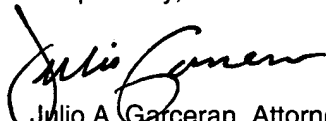
SIR:

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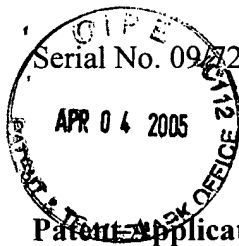
Respectfully,


Julio A. Garceran, Attorney
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Date: 4/1/05

Docket Administrator (Room 3J-219)
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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor(s) Eshwar Pittampalli
Subramanian Vasudevan
Case 14-1
Serial No. 09/726,962 Group Art 2685
File Date November 30, 2000
Examiner Nguyen, Simon
Title System and Method For Preventing Dropped Calls

ASSISTANT COMMISSIONER FOR PATENTS AND TRADEMARK
WASHINGTON, DC 20231

Dear Sir:

APPEAL BRIEF UNDER 37 CFR § 1.192

I. Real Party In Interest

The real party in interest is Lucent Technologies Inc., 600 Mountain Avenue, PO Box 636, Murray Hill, NJ, 07974-0636.

II. Related Appeals and Interferences

There are no related appeals or interferences.

III. Status of the Claims

Claims 1-12 are now in this case. Claims 1-2, 6-7 and 11-12 were rejected under 35 U.S.C. section 103(a) as being unpatentable over U.S. 6,445,918 to Hellander ("Hellander") in view of U.S. Patent No. 6,667,962 to Lee et al. ("Lee"). The Examiner also rejected claims 3-5 and 8-10 under 35 U.S.C. section 103(a) as being unpatentable over Hellander in view Lee and further in view of U.S. 6,151,502 to Padovani et al. ("Padovani"). Claims 1-12 are on appeal.

IV. Status of Amendments

An amendment filed on July 14, 2004 was entered. A notice of appeal was filed on February 3, 2005 in response to the final Office Action dated November 3, 2004.

V. Summary of the Invention

The present invention is a system and method for preventing a call from being dropped by changing from a first set of serving base station(s) for the call to a second set of serving base station(s) which can be determined independently by both the wireless unit and the wireless communications system. As such, the wireless unit can attempt to recover the call using the second set of serving base station(s) even without the availability of a communication link between the wireless unit and the current set of serving base station(s). The wireless communications system can independently determine a second set of serving base station(s) for the call using information known at both the wireless communication system and at the wireless unit before the communication link was severed. For example, the wireless unit and the communications system can determine the second set of serving base station(s) using the candidate list identified with a previous pilot strength measurement message (PSMM) known to have been successfully reported to the wireless communications system. After the wireless communications system and the wireless unit determine that a call is in danger of being dropped, the wireless unit and the wireless communications system can automatically add base station(s) in the candidate set to the active set in attempting to recover the call. (Page 5, lines 10-26; FIG. 2)

VI. Issues

A. Whether claims 1-2, 6-7 and 11-12 are patentable under 35 U.S.C. section 103(a) over Hellander in view of Lee.

B. Whether claims 3-5 and 8-10 are patentable under 35 U.S.C. section 103(a) over Hellander in view Lee and further in view of Padovani.

VII. Grouping of Claims

Claims 1-12 are in a single group.

VIII. Argument

Claims 1-2, 6-7 and 11-12 were rejected under 35 U.S.C. section 103(a) as being unpatentable over Hellander in view of Lee.

The claimed invention was amended to focus that the claims call for autonomously changing from a first set of base station(s) to a second set of base station(s) such that the second set of base station(s) is automatically established both at the wireless communications system and the wireless unit without requiring communication between the wireless communications system and the wireless unit. The Examiner acknowledges that Hellander does not specifically disclose the step of automatically establishing the second set of base station(s) without requiring communication between the wireless unit and the system. In Hellander, the target base station is selected by the mobile, and a origination re-connect message from the mobile unit to the target base station is required to establish the target base station or new set of base station(s) at the wireless communications system to service the call. For that, the Examiner cites the Summary of the Invention of Lee that generally describes a method for automatically recovering a call which is abnormally released.

Lee, however, does not disclose this feature of, as called for by claim 1, “autonomously changing from said first set of base station(s) to a second set of base station(s) ... based on information known to be at both the wireless unit and the wireless communications system before said communications between said wireless unit and said first set of serving base station(s) is lost such that said second set of base station(s) is automatically established both at said wireless communications system and said wireless unit without requiring communication between said wireless communications system and said wireless unit, to service the call.” Independent claims 6, 11 and 12 and there dependent claims contain analogous features.

If anything, Lee teaches against these claimed features. In Lee, when the call is abnormally released, the mobile station does not repeat initial pilot acquisition; however, the mobile station does performs energy measurements on PN offset values of neighboring base stations, received from the previous service base station, to determine a reference active sector. Based on whether the determined sector is identical to the previous reference active sector, call re-origination is performed from the synch channel state or the paging channel state. Column 10, lines 23-31. Thus, Lee teaches that after a call is abnormally released, the mobile station makes energy measurements from neighboring base stations and then communicates with a selected base station to establish the second base station at both the wireless unit and the wireless communications system. This is different from the claimed invention in which there is an autonomous change to the second set of

base station(s) that are automatically established at both the wireless unit and the wireless communications system without requiring communication between the wireless communication system and the wireless unit after having lost communication between said wireless unit and a first set of base station(s).


Not only does Lee teach that further communications is required to establish the second set of base station(s) at both the wireless unit and the wireless communications system, but Lee also teaches away from autonomously making the change to the second set of base station(s) “based on information known to be at both the wireless unit and the wireless communications system before said communications between said wireless unit and said first set of serving base station(s) is lost,” as called for in the claimed invention. Lee teaches that “since the call is abnormally released, energy values of the active, candidate and neighbor sectors being managed according to the present channel conditions have a low reliability.” Col. 6, lines 25-28. Accordingly, it respectfully submitted that independent claims 1, 6 and 11-12 and their dependent claims are patentable over Hellander in view of Lee.

The Examiner also rejected claims 3-5 and 8-10 under 35 U.S.C. section 103(a) as being unpatentable over Hellander in view of Lee and further in view of Padovani. The Examiner cites Padovani for selecting an active set or candidate set of base stations based on a pilot signal strength measurement. However, as previously mentioned during prosecution, Padovani fails to disclose the features that are missing from Hellander in view of Lee as described above for independent claims 1, 6 and 11-12. Padovani discloses that after a determination is made that a handoff to a second set of base station(s) is desired, the wireless unit continues communicating with the first set of base station(s) to complete the hand-off to the second set of base station(s). In Padovani, if communications is lost before a hand-off to a second set of base station(s) is complete, then the call is dropped. Thus, because claims 3-5 and 8-10 ultimately depend from independent claims 1 and 6, those claims are patentable at least for the reason that they depend on an allowable independent claim as described above.

IX. Appendix

The claims under appeal are in Appendix A.

Respectfully,
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Att.
Appendix A

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Date: 4/1/05

APPENDIX A
Claims on Appeal

1. A method of recovering a call between a wireless unit and a wireless communications system comprising the steps of:
after having lost communication between said wireless unit and a first set of base station(s) servicing said call, autonomously changing from said first set of base station(s) to a second set of base station(s), independent of said wireless communications system and based on information known to be at both the wireless unit and the wireless communications system before said communications between said wireless unit and said first set of serving base station(s) is lost such that said second set of base station(s) is automatically established both at said wireless communications system and said wireless unit without requiring communication between said wireless communications system and said wireless unit, to service said call; and

communicating with said second set of serving base station(s) to continue said call.

2. The method of claim 1 wherein said step of communicating comprising the step of:

using a channel which can be determined at both the wireless communication system and at the wireless unit before said communication is lost between said wireless unit and said first set of serving base station(s) to receive communications from said at least one of said second set of base station(s) after said communication is lost with said first set of serving base station(s).

3. The method of claim 2 further including the step of:

using, after communication between said wireless unit and said first set of serving base station(s) is lost, a candidate list identified with a previous pilot strength measurement message (PSMM) known to have been successfully reported to the wireless communications system before said communication between said wireless unit and said first set of serving base station(s) is lost to establish said second set of base station(s) at

7 said wireless unit and said wireless communications system to service said call between
8 said wireless unit and said wireless communications system.

1 4. The method of claim 3 wherein said step of changing including the step of:
2 automatically designating base station(s) in said candidate set as active.

1 5. The method of claim 4 further comprising:
2 receiving a channel assignment message, over a predetermined control channel
3 from at least one of said second set of base station(s), which provides at least forward
4 channel assignments for at least one of said second set of base station(s).

1 6. A method of recovering a call between a wireless unit and a wireless
2 communications system comprising the steps of:
3 after having lost communication between said wireless unit and a first set of base
4 station(s) servicing said call, autonomously changing from said first set of base station(s)
5 to a second set of base station(s), independent of said wireless unit and based on
6 information known to be at both the wireless unit and the wireless communications
7 system before said communication between said wireless unit and said first set of serving
8 base station(s) is lost such that said second set of base station(s) is automatically
9 established both at said wireless communications system and said wireless unit without
10 requiring communication between said wireless communications system and said
11 wireless unit, to service said call; and
12 communicating with said wireless unit using a second set of serving base
13 station(s) to continue said call.

1 7. The method of claim 6 wherein said step of communicating comprising the step
2 of:

3 using a channel which can be determined at both the wireless communication
4 system and at the wireless unit before said communication is lost between said wireless
5 unit and said first set of serving base station(s) to receive communications from said at
6 least one of said second set of base station(s) after said communication is lost with said
7 first set of serving base station(s).

1 8. The method of claim 7 wherein said step of using including the step of:

2 using, after communication between said wireless unit and a first set of serving
3 base station(s) is lost, a candidate list identified with a previous pilot strength
4 measurement message (PSMM) known to have been successfully reported to the wireless
5 communications system before said communication between said wireless unit and said
6 first set of serving base station(s) is lost to establish said second set of base station(s) at
7 said wireless unit and said wireless communications system to service said call between
8 said wireless unit and said wireless communications system.

1 9. The method of claim 8 wherein said step of changing including the step of:
2 automatically designating base station(s) in said candidate set as active.

1 10. The method of claim 9 further comprising:
2 transmitting a channel assignment message, over a predetermined control channel
3 from at least one of said second set of base station(s), which provides at least forward
4 channel assignments for said at least one of said second set of base station(s).

1 11. A wireless unit comprising:
2 processing circuitry configured to, after having lost communication between said
3 wireless unit and a first set of base station(s) servicing said call, autonomously change
4 from said first set of base station(s) to a second set of base station(s), independent of said
5 wireless communications system and based on information known to be at both the
6 wireless unit and the wireless communications system before said communication
7 between said wireless unit and said first set of serving base station(s) is lost such that said
8 second set of base station(s) is automatically established both at said wireless
9 communications system and said wireless unit without requiring communication between
10 said wireless communication system and said wireless unit, to service said call, and
11 further configured to communicate with said second set of serving base station(s) to
12 continue said call.

1 12. A wireless communications system comprising:
2 processing circuitry configured to, after having lost communication between said
3 wireless unit and a first set of base station(s) servicing said call, autonomously change
4 from said first set of base station(s) to a second set of base station(s), independent of said
5 wireless unit and based on information known to be at both the wireless unit and the

6 wireless communications system before said communication between said wireless unit
7 and said first set of serving base station(s) is lost such that said second set of base
8 station(s) is automatically established both at said wireless communications system and
9 said wireless unit without requiring communication between said wireless
10 communications system and said wireless unit, to service said call, and further configured
11 to communicate with said wireless unit using a second set of serving base station(s) to
12 continue said call.